

INFORMATION CONCERNING

# Some of the Principal Navies of the World

A SERIES OF TABLES COMPILED TO  
ANSWER POPULAR INQUIRY



Office of Naval Intelligence  
December, 1911

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WASHINGTON  
GOVERNMENT PRINTING OFFICE  
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## PREFACE.

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The Navy Department is so frequently in receipt of letters from all parts of the country requesting information for debating societies, journals, and periodicals, as well as individuals, concerning the relative strengths of the principal naval powers, the types of vessels building or built, and facts concerning the type of battleship popularly known as *Dreadnought*, that it has directed the Office of Naval Intelligence to prepare tables which will substantially make reply to the greater part of such letters.

Under these instructions the Office of Naval Intelligence has compiled the following tables from such data as may have been made public in the several countries enumerated therein; and while these tables may be regarded as substantially correct, it is possible that inaccuracies may occur, for the reason that few countries beside the United States publish all the data concerning their fighting strength.

Tables I, II, III, IV, and V were compiled December 1, 1911, and are here reproduced.

T. M. POTTS,

*Captain, U. S. Navy, Director of Naval Intelligence.*

OFFICE OF NAVAL INTELLIGENCE

NAVY DEPARTMENT, *December, 1911.*



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TABLE I.

## WARSHIP TONNAGE OF THE PRINCIPAL NAVAL POWERS

NUMBER AND DISPLACEMENT OF WARSHIPS, BUILT AND BUILDING, OF 1,000 OR MORE TONS, AND OF TORPEDO CRAFT OF MORE THAN 50 TONS.

[March 1, 1911]

TYPE OF VESSEL	GREAT BRITAIN				GERMANY				UNITED STATES				FRANCE				JAPAN				RUSSIA				ITALY				AUSTRIA			
	Built		Building		Built		Building		Built		Building		Built		Building		Built		Building		Built		Building		Built		Building		Built		Building	
	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons	Number	Tons		
Battleships <sup>1</sup> (Dreadnought type).	8	151,350	10	225,500	4	74,408	9	193,500	4	72,000	5	122,650	..	..	2	40,181	..	..	2	41,600	..	..	4	92,000	..	..	4	84,000	..	..	2	40,000
Battleships, first class <sup>2</sup> . . . .	47	606,450	..	..	21	262,616	..	..	25	334,146	..	..	17	221,716	5	99,150	13	191,678	..	..	9	121,200	..	..	9	109,000	..	..	5	60,342	1	14,271
Coast-defense vessels <sup>3</sup> . . . .	..	..	..	..	6	24,308	..	..	5	16,981	..	..	3	17,190	..	..	3	18,786	..	..	2	10,380	..	..	..	..	..	..	6	41,700	..	..
Armored cruisers <sup>4</sup> (Invincible type).	4	70,500	45	116,450	1	18,000	3	60,000	..	..	..	..	..	..	2	20,500	1	27,500	..	..	..	..	..	..	..	..	..	..	..	..	..	
Armored cruisers . . . . .	34	406,800	..	..	9	94,245	..	..	12	157,445	..	..	21	197,791	1	13,719	11	103,000	..	..	7	70,200	..	..	10	78,520	..	..	3	18,500	..	..
Cruisers above 6,000 tons <sup>5</sup> . . .	16	161,500	..	..	..	..	..	..	5	43,800	..	..	3	21,022	2	13,130	..	..	7	10,460	..	..	..	..	..	..	..	..	..	..	..	
Cruisers 6,000 to 3,000 tons <sup>6</sup> . .	42	133,940	412	50,580	25	102,380	4	21,650	14	40,541	..	..	7	29,479	9	34,540	3	16,000	..	..	2	4,300	..	..	..	..	3	9,750	3	11,493	..	..
Cruisers 3,000 to 1,000 tons <sup>7</sup> . .	23	49,540	..	..	16	36,077	..	..	11	13,437	..	..	2	4,705	5	9,178	..	..	2	2,680	..	..	7	14,720	..	..	3	7,650	..	..	..	..
Torpedo boat destroyers . . . .	174	99,500	433	25,490	93	47,262	16	11,200	30	16,554	12	8,194	65	21,748	20	14,178	57	20,667	4	3,700	97	30,254	3	2,550	23	7,097	10	6,130	14	5,762	..	..
Torpedo boats . . . . .	19	12,110	..	..	27	4,719	..	..	28	4,802	..	..	255	21,324	2	300	19	5,560	..	..	45	6,197	..	..	58	8,500	30	3,750	47	7,135	..	..
Submarines . . . . .	60	12,602	16	9,150	8	2,280	12	5,400	18	3,758	12	5,380	60	15,280	21	9,141	9	1,412	4	1,680	31	6,512	2	1,200	7	1,222	13	4,100	6	1,648	6	1,600
Total tons built and total tons building:	1,541,762		456,780		667,250		297,750		712,767		136,131		552,656		173,735		431,091		89,480		365,713		95,750		219,949		108,330		153,935		31,900	
Total tons built and building ..	2,278,642				965,045				849,501				726,411				622,671				401,463				328,289				209,899			

<sup>1</sup> Battleships having a main battery of more than 10 inches or more in caliber.<sup>2</sup> Battleships under construction which have not yet received their authorization by Congress.<sup>3</sup> Battleships, first class, are those of a main battery of more than 10 inches.<sup>4</sup> Battleships, second class, are those of a main battery of 8 to 10 inches.<sup>5</sup> Armored cruisers having guns of largest caliber in main battery and capable of making 15 knots or more in speed. Those having no armor or speed of less than 15 knots are not included in this table.<sup>6</sup> Cruisers 6,000 to 3,000 tons are those of a main battery of 6 to 10 inches.<sup>7</sup> Cruisers 3,000 to 1,000 tons are those of a main battery of 4 to 6 inches.

All vessels of more than 1,000 tons are, in this table, placed according to displacement as cruisers. Some are considered as cruisers in which battery and protection have been modified to more extensive types. The word "protected" has been omitted because all cruisers except the smallest and oldest now have protective deck.

The word "destroyer" is not included in the table.

These vessels are of the type known as "torpedo boat destroyers" and "torpedo boats."

These are usually known as "torpedo boats."

Torpedo boats of 500 to 1,000 tons are not included in this table.

Vessels of less than 1,000 tons are not included in this table.

Torpedo craft of less than 50 tons.



TABLE II.

## RELATIVE ORDER OF WARSHIP TONNAGE.

[Dec. 1, 1911.]

Present order (tonnage completed).		As would be the case were vessels building now completed.	
Nation.	Tonnage.	Nation.	Tonnage.
Great Britain.....	1, 896, 149	Great Britain.....	2, 324, 579
United States.....	757, 711	Germany.....	1, 087, 399
Germany.....	749, 699	United States.....	885, 066
France.....	630, 705	France.....	741, 425
Japan.....	421, 369	Japan.....	590, 119
Russia.....	297, 819	Russia.....	473, 879
Italy.....	203, 812	Italy.....	312, 122
Austria.....	167, 993	Austria.....	267, 442

TABLE III.

## PERSONNEL.

[Dec. 1, 1911.]

Rank.	England.	France.	Germany.	Japan.	United States.
Admirals of the fleet.....	4	.....	2	1	( <sup>1</sup> )
Admirals.....	12	.....	5	7	.....
Vice admirals.....	22	15	12	20	.....
Rear admirals.....	55	30	22	38	<sup>2</sup> 30
Captains and commanders...	636	340	302	296	212
Other line officers.....	2, 274	1, 509	1, 596	1, 710	1, 114
Midshipmen at sea.....	606	61	398	154	287
Engineer officers.....	940	505	433	696	.....
Medical officers.....	593	<sup>3</sup> 413	286	<sup>4</sup> 358	348
Pay officers.....	697	216	236	324	202
Chaplains.....	138	.....	.....	.....	24
Warrant officers.....	2, 494	<sup>5</sup> 2, 350	2, 512	1, 520	645
Enlisted men.....	105, 434	53, 316	50, 389	42, 043	47, 500
Marine officers.....	425	.....	109	.....	334
Enlisted men (marines).....	<sup>6</sup> 19, 635	.....	<sup>7</sup> 4, 672	.....	9, 521
Total.....	133, 965	58, 755	60, 974	47, 167	60, 217

<sup>1</sup> The Admiral of the Navy.<sup>2</sup> The United States now has, temporarily, as extra numbers, due to promotion for war service and to officers restricted by law to engineering duty only on shore only, 12 flag officers, 26 captains, 4 commanders, 11 lieutenant commanders, and 1 lieutenant.<sup>3</sup> Includes pharmaeists and apothecaries.<sup>4</sup> Includes pharmaceutical officers.<sup>5</sup> Includes adjutants, premier maîtres, and maîtres of all branches.<sup>6</sup> Includes 3,100 men of the Coast Guard.<sup>7</sup> Marine infantry and seaman artillery.

TABLE IV.  
VESSELS BUILT.

[Dec. 1, 1911.]

	Battleships, Dread- nought type. <sup>1</sup>	Battleships. <sup>2</sup>	Armored cruisers, Invincible type. <sup>3</sup>	Armored cruisers.	Cruisers. <sup>4</sup>	Destroyers.	Torpedo boats.	Submarines.	Coast-defense ves- sels. <sup>5</sup>
England.....	12	42	5	34	<sup>6</sup> 79	<sup>6</sup> 192	59	65	0
Germany.....	7	21	2	9	39	109	22	14	5
United States.....	6	25	0	12	30	36	28	20	4
France.....	0	20	0	22	10	72	200	66	2
Japan.....	0	13	2	11	15	58	59	10	2
Russia.....	0	9	0	6	11	95	29	31	2
Italy.....	0	8	0	10	6	22	46	9	0
Austria.....	0	6	0	3	6	14	43	6	6

<sup>1</sup> Battleships having a main battery of all big guns (11 inches or more in caliber).

<sup>2</sup> Battleships, first class, are those of (about) 10,000 tons or more displacement.

<sup>3</sup> Armored cruisers having guns of largest caliber in main battery and capable of taking their place in line of battle with the battleships. They have an increase of speed at the expense of carrying fewer guns in main battery, and a decrease in armor protection; also called battleship cruisers.

<sup>4</sup> Includes all unarmored cruising vessels above 1,000 tons displacement.

<sup>5</sup> Includes smaller battleships and monitors. No more vessels of this class are being proposed or built by the great powers.

<sup>6</sup> Includes vessels of colonies.

TABLE V.  
VESSELS BUILDING OR AUTHORIZED.

[Dec. 1, 1911.]

	Battleships, Dread- nought type.	Battleships.	Armored cruisers, Invincible type.	Armored cruisers.	Cruisers.	Destroyers.	Torpedo boats.	Submarines.
England <sup>1</sup> .....	10	0	<sup>2</sup> 5	0	<sup>2</sup> 10	<sup>2</sup> 31	0	<sup>2</sup> 17
Germany <sup>3</sup> .....	9	0	3	0	6	12	0	<sup>4</sup> 10
United States.....	6	0	0	0	1	14	0	18
France.....	4	0	0	0	0	13	0	15
Japan <sup>5</sup> .....	3	0	4	0	3	2	0	3
Russia.....	7	0	0	0	0	13	0	8
Italy.....	6	0	0	0	3	10	46	11
Austria.....	4	0	0	0	3	6	12	6

<sup>1</sup> England has no continuing shipbuilding policy, but usually lays down each year 5 armored ships with a proportional number of smaller vessels.

<sup>2</sup> Includes vessels of colonies.

<sup>3</sup> Germany has a continuing shipbuilding program, governed by a fleet law authorized by the Reichstag. For 1912 there are authorized 1 battleship, 1 armored cruiser, 2 cruisers, 12 destroyers. Eventual strength to consist of 38 battleships, 20 armored cruisers, 38 cruisers, 144 destroyers.

<sup>4</sup> \$3,570,000 authorized for experiments and further construction.

<sup>5</sup> \$78,837,591 authorized to be expended from 1911 to 1917 for the construction of war vessels.

NOTE.—Vessels undergoing trials are considered as completed.

The following vessels are not included in the tables: Those over 20 years old unless they have been reconstructed and rearmed since 1905; transports, colliers, repair ships, converted merchant vessels, or any other auxiliaries; vessels of less than 1,000 tons, except torpedo craft; torpedo craft of less than 50 tons.

Table V includes vessels authorized but not yet laid down, as well as those actually under construction.

TABLE VI.

## BATTLESHIPS AND ARMORED CRUISERS PRIOR TO THE DREADNOUGHT TYPE.

[Dec. 1, 1911.]

## GREAT BRITAIN.

	Built.			Building.			
	Num- ber.	Tons.	Guns, 8-inch and larger.	Num- ber.	Tons.	Guns, 8-inch and larger.	Author- ized.
Battleships.....	42	617,500	$\left\{ \begin{array}{l} 8 \text{ } 13''.5 \\ 152 \text{ } 12'' \\ 8 \text{ } 10'' \\ 52 \text{ } 9''.2 \end{array} \right\}$				
Armored cruisers.....	34	406,800	68 9''.2				

## GERMANY.

Battleships.....	21	252,712	$\left\{ \begin{array}{l} 46 \text{ } 11'' \\ 40 \text{ } 9''.5 \end{array} \right\}$				
Armored cruisers.....	9	94,245	$\left\{ \begin{array}{l} 6 \text{ } 9''.5 \\ 44 \text{ } 8''.3 \end{array} \right\}$				

## UNITED STATES.

Battleships.....	25	334,146	$\left\{ \begin{array}{l} 32 \text{ } 13'' \\ 68 \text{ } 12'' \\ 144 \text{ } 8'' \end{array} \right\}$				
Armored cruisers.....	12	157,445	$\left\{ \begin{array}{l} 16 \text{ } 10'' \\ 36 \text{ } 8'' \end{array} \right\}$				

## FRANCE.

Battleships.....	14	177,825	$\left\{ \begin{array}{l} 46 \text{ } 12'' \\ 10 \text{ } 10''.8 \end{array} \right\}$				
Armored cruisers.....	22	211,070	72 17''.6				

<sup>1</sup> 7.6-inch, largest caliber carried.

TABLE VI—Continued.

BATTLESHIPS AND ARMORED CRUISERS PRIOR TO THE DREADNOUGHT  
TYPE—Continued.

## JAPAN.

	Built.			Building.			
	Num- ber.	Tons.	Guns, 8-inch and larger.	Num- ber.	Tons.	Guns, 8-inch and larger.	Author- ized.
Battleships.....	11	152,548	$\left\{ \begin{array}{l} 36 \text{ } 12'' \\ 6 \text{ } 8'' \end{array} \right\}$				
Armored cruisers.....	9	81,400	$\left\{ \begin{array}{l} 32 \text{ } 8'' \\ 1 \text{ } 10'' \end{array} \right\}$				

## ITALY.

Battleships.....	8	95,700	$\left\{ \begin{array}{l} 16 \text{ } 12'' \\ 8 \text{ } 10'' \\ 56 \text{ } 8'' \end{array} \right\}$				
Armored cruisers.....	10	78,520	$\left\{ \begin{array}{l} 19 \text{ } 10'' \\ 6 \text{ } 8'' \end{array} \right\}$				

TABLE VII.

DREADNOUGHT TYPE OF BATTLESHIPS, WITH CONTEMPORARIES OF OVER 18,000 TONS DISPLACEMENT, AND ARMORED CRUISERS OF INVINCIBLE TYPE (NOW CALLED BATTLE CRUISERS).

## GREAT BRITAIN.

	Built.			Building.			Number authorized up to December, 1911, but not yet building or ordered.
	Number.	Tons.	Guns.	Number.	Tons.	Guns.	
Battleships.....	12	236, 350	$\left\{ \begin{array}{l} 20 \text{ } 13'' \cdot 5 \\ 100 \text{ } 12'' \end{array} \right\}$	10	247, 000	$\left\{ \begin{array}{l} 100 \text{ } 13'' \cdot 5 \\ 16 \text{ } 12'' \\ 16 \text{ } 13'' \cdot 5 \end{array} \right\}$	1
Battle cruisers.....	5	96, 850	$\left\{ \begin{array}{l} 8 \text{ } 13'' \cdot 5 \\ 32 \text{ } 12'' \end{array} \right\}$	4	90, 800	$\left\{ \begin{array}{l} 16 \text{ } 12'' \\ 16 \text{ } 13'' \cdot 5 \end{array} \right\}$	

## GERMANY.

Battleships.....	7	141, 720	$\left\{ \begin{array}{l} 36 \text{ } 12'' \\ 48 \text{ } 11'' \end{array} \right\}$	9	217, 400	$\left\{ \begin{array}{l} 108 \text{ } 12'' \\ 20 \text{ } 12'' \\ 10 \text{ } 11'' \end{array} \right\}$	
Battle cruisers.....	2	41, 637	18 11''	3	72, 650	$\left\{ \begin{array}{l} 20 \text{ } 12'' \\ 10 \text{ } 11'' \end{array} \right\}$	

## UNITED STATES.

Battleships.....	6	115, 650	56 12''	4	106, 000	$\left\{ \begin{array}{l} 24 \text{ } 12'' \\ 20 \text{ } 14'' \end{array} \right\}$	2
Battle cruisers.....							

## FRANCE.

Battleships.....	6	108, 180	$\left\{ \begin{array}{l} 24 \text{ } 12'' \\ 72 \text{ } 9'' \cdot 4 \end{array} \right\}$	4	92, 368	48 12''	
Battle cruisers.....							

## JAPAN.

Battleships.....	2	39, 150	$\left\{ \begin{array}{l} 8 \text{ } 12'' \\ 24 \text{ } 10'' \end{array} \right\}$	2	41, 600	24 12''	1
Battle cruisers.....	4	56, 700	$\left\{ \begin{array}{l} 16 \text{ } 12'' \\ 16 \text{ } 8'' \end{array} \right\}$	4	110, 000	32 13'' \cdot 5	

<sup>1</sup> Some of these are supposed to carry 14-inch guns.

TABLE VII—Continued.

**DREADNOUGHT TYPE OF BATTLESHIPS, WITH CONTEMPORARIES OF OVER 18,000 TONS DISPLACEMENT, AND ARMORED CRUISERS OF INVINCIBLE TYPE (NOW CALLED BATTLE CRUISERS)—Continued.**

**RUSSIA.**

	Built.			Building.			Number authorized up to December, 1911, but not yet building or ordered.
	Number.	Tons.	Guns.	Number.	Tons.	Guns.	
Battleships.....				7	158,000	84 12''	.....
Battle cruisers.....							.....

**ITALY.**

Battleships.....				4	84,600	51 12''	2
Battle cruisers.....							.....

**AUSTRIA.**

Battleships.....				4	80,000	48 12''	.....
Battle cruisers.....							.....

**BRAZIL.**

Battleships.....	2	38,500	24 12''	1	27,500	10 14''	.....
Battle cruisers.....							.....

**ARGENTINA.**

Battleships.....				2	56,000	24 12''	.....
Battle cruisers.....							.....

**CHILE.**

Battleships.....				1	28,600	10 14''	1
Battle cruisers.....							.....



TABLE VIII.

**BATTLESHIPS, ARMORED CRUISERS, AND CRUISERS (SCOUTS) OF THE  
SIX PRINCIPAL NAVAL POWERS, LAUNCHED 1906-1911.**

**GREAT BRITAIN.**

Year.	Battle-ships.	Ton-nage.	Arm-ored cruis-ers. <sup>1</sup>	Ton-nage.	Cruis-ers.	Ton-nage.	Total.	Total tonnage.
1906.....	3	50,900	2	29,200	.....	.....	5	80,100
1907.....	3	55,800	4	66,350	.....	.....	7	122,150
1908.....	2	38,500	.....	.....	1	3,300	3	41,800
1909.....	2	39,150	1	18,750	6	25,920	9	83,820
1910.....	3	63,000	1	26,350	4	18,660	8	108,010
1911.....	5	115,500	3	63,950	5	22,620	13	202,070
Total.....	18	362,850	11	204,600	16	70,500	45	637,950

**GERMANY.**

1906.....	2	25,964	2	22,832	2	6,790	6	55,586
1907.....	.....	.....	.....	.....	2	6,988	2	6,988
1908.....	4	74,408	1	15,550	2	7,824	7	97,782
1909.....	3	67,320	1	19,000	3	12,843	7	99,163
1910.....	1	22,440	1	22,637	.....	.....	2	45,077
1911.....	3	72,000	1	22,637	4	21,652	8	116,289
Total.....	13	262,132	6	102,656	13	56,097	32	420,885

**UNITED STATES.**

1906.....	1	16,000	2	29,000	.....	.....	3	45,000
1907.....	.....	.....	.....	.....	3	11,250	3	11,250
1908.....	3	52,000	.....	.....	.....	.....	3	52,000
1909.....	2	41,825	.....	.....	.....	.....	2	41,825
1910.....	1	21,825	.....	.....	.....	.....	1	21,825
1911.....	2	52,000	.....	.....	.....	.....	2	52,000
Total.....	9	183,650	2	29,000	3	11,250	14	223,900

<sup>1</sup> Includes battle cruisers.

TABLE VIII—Continued.

**BATTLESHIPS, ARMORED CRUISERS, AND CRUISERS (SCOUTS) OF THE SIX PRINCIPAL NAVAL POWERS, LAUNCHED 1906-1911—Continued.****JAPAN.**

Year.	Battle-ships.	Tonnage.	Armored cruisers. <sup>1</sup>	Tonnage.	Cruisers.	Tonnage.	Total.	Total tonnage.
1906.....	1	19,350	1	13,750	.....	.....	2	33,100
1907.....	1	19,800	2	29,200	2	5,380	5	54,380
1908.....	.....	.....	.....	.....	1	1,350	1	1,350
1909.....	.....	.....	.....	.....	.....	.....	.....	.....
1910.....	1	20,800	.....	.....	.....	.....	1	20,800
1911.....	1	20,800	.....	.....	3	15,000	4	35,800
Total.....	4	80,750	3	42,950	6	21,730	13	145,430

**FRANCE.**

1906.....	.....	.....	1	13,428	.....	.....	1	13,428
1907.....	1	14,636	1	13,779	.....	.....	2	28,415
1908.....	.....	.....	1	13,779	.....	.....	1	13,779
1909.....	5	90,145	.....	.....	.....	.....	5	90,145
1910.....	1	18,029	.....	.....	.....	.....	1	18,029
1911.....	2	46,184	.....	.....	.....	.....	2	46,184
Total.....	9	168,994	3	40,986	.....	.....	12	209,980

**RUSSIA.**

1906.....	3	42,000	3	31,000	.....	.....	6	73,000
1907.....	1	16,600	1	8,000	.....	.....	2	24,600
1908.....	.....	.....	.....	.....	.....	.....	.....	.....
1909.....	.....	.....	.....	.....	.....	.....	.....	.....
1910.....	.....	.....	.....	.....	.....	.....	.....	.....
1911.....	4	92,000	.....	.....	.....	.....	4	92,000
Total.....	8	150,600	4	39,000	.....	.....	12	189,600

<sup>1</sup> Indicates battle cruisers.

TABLE IX.

## PRINCIPAL CHARACTERISTICS OF BATTLESHIPS RECENTLY COMPLETED OR APPROACHING COMPLETION.

	De- signed speed.	Displace- ment.	Length between perpen- diculars.	Beam.	Draft.	Comple- ment.	Battery.	Torpedo tubes.	Maxi- mum thickness armor belt.	Date launched.	Date of comple- tion.
Bellerophon (Great Britain).	21	18, 600	<i>Feet.</i> 490	<i>Feet.</i> 82	<i>Feet.</i> 27	800	$\left\{ \begin{array}{l} 10\ 12'' \\ 16\ 4'' \end{array} \right.$	$\left. \begin{array}{l} \\ \end{array} \right\}$	11 <i>Inches.</i>	July, 1907	Feb., 1909
Vanguard (Great Britain)....	21	19, 250	500	84	27	800	$\left\{ \begin{array}{l} 10\ 12'' \\ 20\ 4'' \end{array} \right.$	$\left. \begin{array}{l} \\ \end{array} \right\}$	$9\frac{3}{4}$	Feb., 1909	Mar., 1910
Neptune (Great Britain).....	21	19, 900	510	85	27	.....	$\left\{ \begin{array}{l} 10\ 12'' \\ 16\ 4'' \end{array} \right.$	$\left. \begin{array}{l} \\ \end{array} \right\}$	12	Sept., 1909	Jan., 1911
Orion (Great Britain).....	21	22, 500	545	$88\frac{1}{2}$	$27\frac{1}{2}$	.....	$\left\{ \begin{array}{l} 10\ 13.5'' \\ 20\ 4'' \end{array} \right.$	$\left. \begin{array}{l} \\ \end{array} \right\}$	12	Aug., 1910	Nov., 1911
King George V (Great Brit- ain).	21	24, 000	555	89	$27\frac{1}{2}$	.....	$\left\{ \begin{array}{l} 10\ 13.5'' \\ 24\ 4'' \end{array} \right.$	$\left. \begin{array}{l} \\ \end{array} \right\}$	12	Oct., 1911	1912
Nassau (Germany).....	19	18, 602	452	89	$26\frac{1}{2}$	950	$\left\{ \begin{array}{l} 12\ 11'' \\ 12\ 6'' \end{array} \right.$	$\left. \begin{array}{l} \\ \end{array} \right\}$	$9\frac{3}{4}$	Mar., 1908	Oct., 1909
Helgoland (Germany).....	21	22, 440	515	92	27	980	$\left\{ \begin{array}{l} 12\ 12'' \\ 14\ 6'' \end{array} \right.$	$\left. \begin{array}{l} \\ \end{array} \right\}$	$9\frac{3}{4}$	Sept., 1909	Aug., 1911
North Dakota (United States).	21	20, 000	510	85	27	940	$\left\{ \begin{array}{l} 10\ 12'' \\ 14\ 5'' \end{array} \right.$	$\left. \begin{array}{l} \\ \end{array} \right\}$	11	Nov., 1908	Apr., 1910

TABLE IX—Continued.

PRINCIPAL CHARACTERISTICS OF BATTLESHIPS RECENTLY COMPLETED OR APPROACHING COMPLETION—Continued.

	De- signed speed.	Displace- ment.	Length between perpen- diculars.	Beam.	Draft.	Comple- ment.	Battery.	Torpedo tubes.	Maxi- mum thickness armor belt.	Date launched.	Date of comple- tion.
Utah (United States).....	20 $\frac{3}{4}$	21, 825	<i>Feet.</i> 510	<i>Feet.</i> 88	<i>Feet.</i> 28 $\frac{1}{2}$	950	{ 10 12" 16 5"	{ 2	<i>Inches.</i> 11	Dec., 1909	Aug., 1911
Arkansas (United States)...	20 $\frac{1}{2}$	26, 000	554	93	28 $\frac{1}{2}$	1, 040	{ 12 12" 21 5"	{ 2	11	Jan., 1911	1912
New York (United States)...	21	27, 000	565	95	28 $\frac{1}{2}$	1, 070	{ 10 14" 21 5"	{ 4	12	1912	
Vérité (France).....	18	14, 636	439	79 $\frac{1}{2}$	26 $\frac{1}{2}$	768	{ 4 12" 10 7.6"	{ 2	11	May, 1907	Jan., 1908
Voltaire (France).....	19 $\frac{1}{4}$	18, 029	476	84	27 $\frac{1}{2}$	680	{ 4 12" 12 9.5"	{ 4	9.8	Jan., 1909	Aug., 1911
Courbet (France).....	20	23, 100	541	88 $\frac{1}{2}$	29	915	{ 12 12" 22 5.5"	{ 4	10 $\frac{1}{2}$	Sept., 1911	
Aki (Japan).....	20	19, 800	460	84	27 $\frac{1}{2}$	932	{ 4 12" 12 10"	{ 5	9	Apr., 1907	Apr., 1911
Kawachi (Japan).....	20 $\frac{1}{2}$	20, 800	500	84	27 $\frac{1}{2}$	1, 000	{ 12 12" 10 6"	{ 5	9	Oct., 1910	1912

Dante Alighieri (Italy).....	23	18,600	520	87	$27\frac{1}{2}$	1,030	$\left\{ \begin{array}{l} 12\ 12'' \\ 20\ 4.7'' \end{array} \right\}$	3	9	Aug., 1910	1912
Conte di Cavour (Italy).....	22	22,340	554	92	$27\frac{1}{2}$	980	$\left\{ \begin{array}{l} 13\ 12'' \\ 18\ 4.7'' \end{array} \right\}$	3	12	Aug., 1911	
Sebastopol (Russia).....	23	23,000	590	85	$27\frac{1}{2}$	.....	$\left\{ \begin{array}{l} 12\ 12'' \\ 20\ 4.7'' \end{array} \right\}$	0	9	June, 1911	
Minas Geraes (Brazil).....	21	19,250	500	84	25	.....	$\left\{ \begin{array}{l} 12\ 12'' \\ 22\ 4.7'' \end{array} \right\}$	.....	9	Sept., 1908	Jan., 1910
Moreno (Argentina).....	$22\frac{1}{2}$	28,000	575	$95\frac{1}{2}$	28	1,050	$\left\{ \begin{array}{l} 12\ 12'' \\ 12\ 6'' \end{array} \right\}$	2	12	Sept., 1911	1912

TABLE X.

PRINCIPAL CHARACTERISTICS OF BATTLE CRUISERS AND ARMORED CRUISERS RECENTLY COMPLETED OR APPROACHING COMPLETION.

	De- signed speed.	Displace- ment.	Length between perpen- diculars.	Beam.	Draft.	Comple- ment.	Battery.	Torpedo tubes.	Maxi- mum thickness armor belt.	Date launched.	Date of comple- tion.
Indomitable (Great Britain).	25	17,250	<i>Feet.</i> 530	<i>Feet.</i> 78½	<i>Feet.</i> 26	750	{ 8 12" 16 4"	} 5	<i>Inches.</i> 7	Mar., 1907	June, 1908
Indefatigable (Great Brit- ain).	25	18,750	555	80	26½	760	{ 8 12" 16 4"	} 2	7	Oct., 1909	Feb., 1911
Lion (Great Britain).....	29	26,350	660	88½	27½	.....	{ 8 13.5" 16 4"	} 2	9	Aug., 1910	Dec., 1911
Waldeck Rousseau (France).	23	13,779	515	70½	27	740	{ 14 7.6"	} 2	7	Mar., 1908	July, 1911
Blücher (Germany).....	24	15,550	499	80	26½	820	{ 12 8.3" 8 6"	} 4	7	Apr., 1908	Oct., 1909
Von der Tann (Germany)...	26	19,000	561	87	27	900	{ 8 11" 10 6"	} 4	7	Mar., 1909	Sept., 1910
Moltke (Germany).....	26	22,637	610	96½	27	.....	{ 10 11" 12 6"	} 4	10	Apr., 1910	Sept., 1911
Kurama (Japan).....	22	14,600	450	75½	26	850	{ 4 12" 8 8"	} 3	7	Oct., 1907	Feb., 1911
Montana (United States)....	22	14,500	502	73	25	950	{ 4 10" 16 6"	} 4	5	Dec., 1906	July, 1908

TABLE XI.

TIME REQUIRED TO BUILD SOME RECENT BATTLESHIPS OF THE FIVE  
PRINCIPAL NAVAL POWERS.

## GREAT BRITAIN.

Names.	Ton- nage.	Date of contract or order.	Keel laid.	Launched.	Commis- sioned.
Bellerophon.....	18, 600	<sup>1</sup> Sept., 1906	Dec., 1906	July, 1907	Feb., 1909
Superb.....	18, 600	Dec., 1906	Feb., 1907	Nov., 1907	May, 1909
Collingwood.....	19, 250	<sup>1</sup> Oct., 1907	Feb., 1908	Nov., 1908	Apr., 1910
Vanguard.....	19, 250	Mar., 1908	Apr., 1908	Feb., 1909	Mar., 1910
Neptune.....	19, 900	<sup>1</sup> Nov., 1908	Jan., 1909	Sept., 1909	Jan., 1911
Monarch.....	22, 500	Dec., 1909	Apr., 1910	Mar., 1911	<sup>2</sup> Dec., 1911

## GERMANY.

Nassau.....	18, 602	<sup>1</sup> May, 1906	Aug., 1907	Mar., 1908	Oct., 1909
Westfalen.....	18, 602	Oct., 1906	Aug., 1907	July, 1908	Nov., 1909
Posen.....	18, 602	Apr., 1907	July, 1907	Dec., 1908	May, 1910
Rheinland.....	18, 602	Apr., 1907	July, 1907	Sept., 1908	Apr., 1910
Helgoland.....	22, 440	July, 1908	Dec., 1908	Sept., 1909	Aug., 1911

## UNITED STATES.

South Carolina.....	16, 000	July, 1906	Dec., 1906	July, 1908	Mar., 1910
Michigan.....	16, 000	July, 1906	Dec., 1906	May, 1908	Jan., 1910
Delaware.....	20, 000	Aug., 1907	Nov., 1907	Feb., 1909	Apr., 1910
North Dakota.....	20, 000	Aug., 1907	Dec., 1907	Nov., 1908	Apr., 1910
Utah.....	21, 825	Nov., 1908	Feb., 1909	Dec., 1909	Aug., 1911

## FRANCE.

Vérité.....	14, 636	May, 1902	1903	May, 1907	Jan., 1908
Voltaire.....	18, 029	Dec., 1906	June, 1907	Jan., 1909	Aug., 1911
Danton.....	18, 029	<sup>1</sup> May, 1906	Jan., 1908	July, 1909	Feb., 1911

## JAPAN.

Satsuma.....	19, 350	<sup>1</sup> 1904	May, 1905	Nov., 1906	Apr., 1910
Aki.....	19, 800	<sup>1</sup> 1905	Mar., 1906	Apr., 1907	<sup>3</sup> Apr., 1911

<sup>1</sup> Built in Government dockyards.<sup>2</sup> Trials.<sup>3</sup> Trials in December, 1910.

TABLE XII.

BATTLESHIPS AND BATTLE CRUISERS <sup>1</sup> AUTHORIZED, 1907-1911.

Country.	1907		1908		1909		1910		1911	
	B. S.	B. C.	B. S.	B. C.	B. S.	B. C.	B. S.	B. C.	B. S.	B. C.
Great Britain...	3	.....	1	1	6	<sup>2</sup> 4	4	1	4	1
Germany.....	2	1	3	1	3	1	3	1	3	1
United States...	1	.....	2	.....	2	.....	2	.....	2	.....
Japan.....	2	2	.....	.....	.....	.....	.....	1	1	3
France.....	.....	.....	.....	.....	.....	.....	2	.....	2	.....

<sup>1</sup> Armored cruisers able to take position in line of battle.<sup>2</sup> Includes two authorized by colonies.

TABLE XIII.

## NAVAL EXPENDITURES.

Year.	England.	Germany.	United States.	Japan.	France.
1906.....	\$167, 525, 238	\$58, 405, 200	\$104, 508, 719	\$19, 231, 945	\$60, 025, 405
1907.....	159, 758, 177	69, 210, 400	99, 693, 298	41, 076, 145	57, 394, 167
1908.....	160, 074, 573	80, 229, 800	129, 972, 971	40, 312, 533	58, 941, 096
1909.....	<sup>1</sup> 167, 780, 705	<sup>2</sup> 97, 722, 800	136, 935, 199	35, 870, 061	61, 064, 096
1910.....	<sup>1</sup> 194, 000, 502	<sup>2</sup> 103, 268, 200	131, 404, 640	37, 542, 184	<sup>2</sup> 72, 485, 000
1911.....	<sup>1</sup> 216, 036, 101	<sup>1</sup> 107, 232, 000	<sup>2</sup> 126, 405, 509	<sup>1</sup> 42, 944, 329	<sup>2</sup> 80, 371, 109

<sup>1</sup> Estimates.<sup>2</sup> Authorized.



TABLE XIV.

## COST OF SOME OF THE CAPITAL SHIPS RECENTLY COMPLETED.

Name.	Type.	Nation.	Dis- place- ment.	Year com- pleted.	Total cost.
Superb . . . . .	B. S . . .	Great Britain.	18, 600	1909	\$8, 158, 828
Neptune . . . . .	B. S . . .	do . . . . .	19, 900	1911	8, 411, 497
Monarch . . . . .	B. S . . .	do . . . . .	22, 500	1911	<sup>1</sup> 8, 501, 970
Orion . . . . .	B. S . . .	do . . . . .	22, 500	1911	<sup>1</sup> 8, 613, 189
Indefatigable . . . . .	B. C . . .	do . . . . .	18, 750	1911	7, 530, 549
Lion . . . . .	B. C . . .	do . . . . .	26, 350	1911	<sup>1</sup> 9, 125, 875
Nassau . . . . .	B. S . . .	Germany . . . .	18, 602	1909	<sup>2</sup> 8, 748, 880
Helgoland . . . . .	B. S . . .	do . . . . .	22, 440	1911	<sup>2</sup> 11, 209, 800
Von der Tann . . . . .	B. C . . .	do . . . . .	19, 000	1910	<sup>2</sup> 8, 726, 508
Moltke . . . . .	B. C . . .	do . . . . .	22, 637	1911	<sup>2</sup> 10, 491, 040
Satsuma . . . . .	B. S . . .	Japan . . . . .	19, 350	1910	<sup>3</sup> 9, 262, 800
Kurawa . . . . .	B. C . . .	do . . . . .	14, 600	1911	<sup>3</sup> 6, 474, 000
Danton . . . . .	B. S . . .	France . . . . .	18, 030	1911	9, 641, 707
Voltaire . . . . .	B. S . . .	do . . . . .	18, 030	1911	10, 520, 000
Zrinyi . . . . .	B. S . . .	Austria . . . . .	14, 271	1911	<sup>3</sup> 7, 714, 000
Minas Geraes . . . . .	B. S . . .	Brazil . . . . .	19, 250	1910	8, 863, 843
Michigan . . . . .	B. S . . .	United States	16, 000	1910	6, 805, 924
South Carolina . . . . .	B. S . . .	do . . . . .	16, 000	1910	6, 683, 485
Delaware . . . . .	B. S . . .	do . . . . .	20, 000	1910	8, 034, 994
North Dakota . . . . .	B. S . . .	do . . . . .	20, 000	1910	8, 472, 150

<sup>1</sup> Does not include guns and stores.<sup>2</sup> Amount appropriated.<sup>3</sup> Approximately.

## CONTINUOUS SHIPBUILDING PROGRAMS.

### GERMANY.

Year.	Battle-ships.	Armored cruisers.	Small cruisers.
1908.....	3	1	2
1909.....	3	1	2
1910.....	3	1	2
1911.....	3	1	2
1912.....	1	1	2
1913.....	1	1	2
1914.....	1	1	2
1915.....	1	1	2
1916.....	1	1	2
1917.....	1	1	2

In addition to this program Germany annually provides for 12 torpedo-boat destroyers and a number of submarines. Her object is to increase, by the year 1917, her total strength to 38 battleships, 20 armored cruisers, 38 small cruisers—all to be less than 20 years old—and 144 torpedo craft, less than 12 years old.

### GREAT BRITAIN.

Great Britain has no fixed program, but her policy is to maintain the two-power standard, viz, a preponderance of 10 per cent over the combined strengths of the navies of the two next strongest naval powers.

### UNITED STATES.

United States has no fixed program.

### FRANCE.

France has no fixed program, but the adoption of such a program has recently been recommended by the minister of marine.

### JAPAN.

The Japanese Diet has recently authorized the amalgamation of the existing shipbuilding programs or appropriations into one under the title of "Expenses for maintaining naval preparations." The

unexpended balance of the existing appropriations amounts to \$82,892,305, to which was added a further sum of \$40,947,130 for the purpose of enlarging ships already authorized but not yet commenced. The total sum available therefore amounts to \$123,839,443, which is to be expended in six years—that is, up to and including the fiscal year 1916–17. Out of this there has been set aside for the construction of men-of-war the sum of \$78,837,591.

#### BRAZIL.

In December, 1904, Brazil provided for a shipbuilding program, which has since been modified (put into execution in 1907) and now includes—

- 3 battleships.
- 2 scout cruisers.
- 10 torpedo-boat destroyers.

All of the above vessels except one battleship have been completed and delivered to Brazil. The third battleship is now under construction in England.

#### ARGENTINA.

Argentina has provided for a program of 2 large battleships and 12 destroyers, and authorized increasing the program, if required, to 3 large battleships and 16 destroyers.

#### SPAIN.

Spain, in 1908, provided a program for the upbuilding of her navy, as follows:

	Tons each.
3 battleships of about.....	15,000
3 torpedo-boat destroyers.....	350
24 torpedo boats.....	180
4 gunboats of about.....	1,000

#### AUSTRIA.

Austria has adopted a program extending to the year 1917.

#### ITALY.

Four battleships are being built at present and it is reported that 4 more are contemplated.

Italy has a shipbuilding program extending to the year 1917–18. A certain sum is allowed each year for new constructions and the maintenance of the fleet. The number and type of ships to be laid down each year is determined by the minister of marine; therefore, it is not possible to know what vessels are to be built until the navy department has made its decision.

## SHIPBUILDING PROGRAMS, 1911-12.

### GREAT BRITAIN.

5 large armored ships (4 battleships, 1 battleship cruiser).	6 submarines.
3 protected cruisers.	2 river gunboats.
1 unarmored cruiser.	1 depot ship for destroyers.
20 destroyers.	1 hospital ship.

### GERMANY.

3 battleships.	12 destroyers.
1 battleship cruiser.	\$3,570,000 for submarines.
2 protected cruisers.	3 surveying steamers.

### UNITED STATES.

2 battleships.	1 gunboat.
8 destroyers.	1 river gunboat.
4 submarines.	1 submarine tender.
2 fleet colliers.	

### FRANCE.

2 battleships.	2 mine-laying vessels.
2 submarines.	

### JAPAN.

1 battleship.	3 battle cruisers.
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### AUSTRIA.

The following program, to be completed by 1916, has been authorized:

4 battleships (including 2 now under construction).	6 destroyers.
3 scout cruisers.	12 torpedo boats.
	6 submarines.

### RUSSIA.

3 battleships.	6 submarines.
9 destroyers.	

## REFERENCE BOOKS.

PROBABLY MAY BE FOUND IN A PUBLIC LIBRARY.

*Navy Yearbook* (Pulsifer).—Giving annual appropriations and various acts relating to the Navy, beginning 1883; alphabetical list of all United States vessels, with data on same; list of vessels of the principal navies of the world, etc. Printed as a congressional document.

*Fighting ships* (Jane).—Giving a detail description of all fighting ships and showing silhouettes, plans, and elevations of ships, description of uniforms, lists of naval bases, etc.

*The Naval Pocketbook* (Clowes).—Giving detail description of individual ships, lists, and numbers, data concerning guns, etc.

*The Naval Annual* (Brassey).—Giving a series of essays on the navies of the world, lists, and numbers, and plan and elevation of principal ships.

For recommendations to Congress and reports of the various bureaus, see annual reports of the Secretary of the Navy.

The tables of "Warship tonnage" and "Sea strength" (Tables I to V, ante) of the principal naval powers are published annually by the Office of Naval Intelligence.

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